In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (currently amended) A method for training a plurality of neural networks for process optimization, comprising the steps of:

determining a first training data record, wherein ~~the training data have a particular accuracy;~~ each training datum has a measurement accuracy and wherein the training data are obtained by perturbing the data within an error range of the measurement accuracy;

generating a plurality of second data training records by perturbing the first training data record with a random variable;

training each of the plurality of neural networks with one of the training data records; and applying the trained neural networks to process optimization.

2. (currently amended) The method according to Claim 1, wherein the ~~first and~~ second training data is assigned an accuracy.

3. (currently amended) The method according to Claim 1, wherein the first and second training data involve measurement quantities, each measurement ~~accuracy~~ quantity having a measurement ~~quantity~~ accuracy.

4. (original) The method according to Claim 1, wherein the random variable is an equidistributed random variable.

5. (original) The method according to Claim 4, wherein the random variable has an expectation of zero and a result of an addition of the random variable to the training datum lies within an accuracy range of the training datum.

6. (original) The method according to Claim 1, wherein the random variable is a normally distributed random variable.

7. (original) The method according to Claim 6, wherein the random variable has an expectation of zero and a result of an addition of the random variable to the respective datum lies with a predetermined probability within the accuracy range of the training datum.

8. (original) The method according to Claim 7, wherein the predetermined probability is about greater than or equal to 95%.

9. (original) The method according to Claim 8, wherein the predetermined probability is about 99%.

10. (original) The method according to Claim 1, wherein the random variable is taken from a rigidly predetermined level.

11. (original) The method according to Claim 1, wherein the random variable is taken from an interval dependent on the accuracy.

12. (currently amended) A method for providing a prognosis by utilizing a plurality of neural networks, comprising the steps of:

determining a first training data record, ~~wherein the training data have a particular accuracy~~ each training datum has a measurement accuracy and wherein the training data are obtained by perturbing the data in an error range of the measurement accuracy;

generating a plurality of second data training records by perturbing the first training data record with a random variable;

training each of the plurality of neural networks with one of the training data records; and

determining a prognosis value based on an evaluation of the prognoses output by the plurality of neural networks.

13. (original) The method according to Claim 11, wherein the prognosis value is calculated by averaging the prognoses output by the plurality of neural networks.

14. (original) The method according to Claim 11, wherein a standard deviation of the prognoses output by the plurality of neural networks is determined as a measure of the reliability of the prognosis value.

15. (original) The method according to Claim 13, wherein the prognosis value is compared with a threshold and a signal is outputted when the standard deviation lies above the threshold value.

16. (original) The method according to Claim 12, wherein the standard deviation of the prognoses output by the plurality of neural networks is used as a measure of the prognosis error.

17. (currently amended) A computer system for determining at least one of prognosis value, comprising

a plurality of neural networks trained by training data records, each training datum has a measurement accuracy and wherein the training data are obtained by perturbing the data in an error range of the measurement accuracy; ~~at least some of which have been trained by means of perturbed training data records~~,

an input means for entering input data into the neural networks,

an evaluating means for evaluating the prognoses output by the neural networks for determining a prognosis value.

18. (original) The computer system according to Claim 17, wherein the evaluation means are designed to calculate the mean of the prognoses.

19. (original) The computer system according to Claim 17, wherein the evaluation means are designed to calculate a standard deviation of the prognoses as a measure of the reliability of the prognosis value.

20. (original) The computer system according to Claim 19, further comprising means for comparing the standard deviation with a predetermined threshold value, and for outputting a signal when the standard deviation lies above the threshold value.

21. (original) The computer system according to Claim 17, further comprising means for outputting a prognosis error, the prognosis error being determined on the basis of the standard deviation.